

ONTARIO INSTITUTION

FOR THE

EDUCATION OF THE BLIND,

BRANTFORD, ONT., CANADA.

ANNUAL REPORTS

OF

MR. INSPECTOR LANGMUIR;

MR. PRINCIPAL HUNTER, M.A.;

DR. W. C. CORSON, PHYSICIAN AND SURGEON,

FOR THE

YEAR ENDING SEPTEMBER 30TH, 1880.



Toronto:

PRINTED BY C. BLACKETT ROBINSON, 5 JORDAN ST.

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INSPECTOR'S REPORT.

During the year which ended on the 30th September last, 203 pupils were in attendance at this Institution, of which number 58 were admitted for the first time during the year. From the opening of the Institution in 1872, up to the close of the past year, 296 pupils have been admitted from the following counties and cities:—

CITY OR COUNTY.	Males.	Females.	Total.	CITY OR COUNTY.	Males.	Females.	Total.
City of Belleville.....	3	....	3	County of Lincoln	3	1	4
County of Brant	3	3	6	City of London	4	7	11
City of Brantford	4	4	8	County of Middlesex....	7	5	12
County of Bruce	3	6	9	District of Muskoka	1	....	1
“ Carleton.....	1	1	2	County of Norfolk	4	4	8
“ Dundas	2	2	4	“ Northumberland	1	6	7
“ Durham	1	3	4	“ Ontario	4	3	7
“ Elgin.....	2	1	3	City of Ottawa	2	....	2
“ Essex	2	3	5	County of Oxford	2	1	3
“ Frontenac	2	1	3	“ Perth	2	7	9
“ Glengarry	2	....	2	“ Peterborough.....	7	2	9
“ Grenville.....	2	....	2	“ Prince Edward	1	2	3
“ Grey	5	6	11	“ Renfrew	6	2	8
City of Guelph.....	1	2	3	“ Russell	1	1	2
County of Haldimand .....	....	4	4	City of St. Catharines ...	2	....	2
“ Halton	2	....	2	County of Simcoe	4	5	9
City of Hamilton.....	5	6	11	“ Stormont	2	....	2
County of Hastings.....	4	1	5	City of Toronto.....	9	11	20
“ Huron.....	5	5	10	County of Victoria	4	1	5
City of Kingston.....	2	2	4	“ Waterloo	4	3	7
County of Kent	6	4	10	“ Welland	2	1	3
“ Lambton	3	1	4	“ Wellington	7	5	12
“ Leeds	7	1	8	“ Wentworth.....	6	5	11
“ Lanark .....	....	1	1	“ York	6	4	10
“ Lennox and Addington....	2	1	3	Province of Quebec	2	....	2
				Total No. of Admissions	162	134	296

The usual statistical information respecting the nationality, religion, age, occupation of parents, etc., of the pupils, will be found at the end of the Principal's Report.

LITERARY EDUCATION.

At my various official inspections, I thoroughly informed myself, by observation of the pupils and by as minute an examination of the classes as the time at my disposal would admit of, respecting the working of the educational department. In all the classes the progress was satisfactory; and in some it was exceedingly marked; and the good discipline and regularity that prevailed throughout the entire literary work were worthy of the highest commendation. Altogether, the condition of the classes for the training and education of the pupils afforded ground for gratification and encouragement. The teaching staff of the literary department comprises one male and four female teachers, the senior teacher having charge also of two classes of the lighter industrial work. The general course of instruction comprises finger-reading, by the various systems of relief-type and point characters; writing, in the same characters as those used by seeing persons, the paper written on being placed, however, on a grooved card; mental arithmetic; English grammar and analysis; geography; history—ancient and modern; English literature, etc., etc. The most approved aids and appliances for the literary instruction of the blind are adopted in the institution, as soon as they have passed through the merely experimental stage and the Principal reports that they can be effectively introduced.

For the six years preceding the close of 1879, during the organization of the school, a sum of money was always available from capital account, for the purchase of articles required for the proper equipment of the literary department, but at the close of 1879 it was decided that all equipment, and all renewals of the same, should for the future be a charge upon the maintenance account; and for this reason the appropriation for "books, apparatus, and appliances" was increased from \$400 to \$600. This amount has not proved sufficient, and will have to be increased to \$750 per annum.

At my March inspection, the Principal was authorized to purchase the annual prizes, the cost of which, for the literary department, was not to exceed \$100.

At my various visits, the Principal reported that the teachers were performing their various duties to his entire satisfaction, and the condition of the classes seemed to verify his report. The absence of one of the teachers from duty, owing to the sickness of a relative, caused considerable inconvenience and disturbance in the routine of class-work, and necessitated my reminding the Principal, for the information and guidance of the staff, that a vacation of three months was annually given, which reduced the teaching term to nine months of the year, during which, except for sickness certified by the Physician, it would be expected that the teachers and instructors would not absent themselves from their work.

MUSICAL INSTRUCTION.

The resignation of two teachers, and a considerable increase in the number of pupils, necessitated some changes in the staff of teachers in the musical department, which took effect at the opening of the current session. The respective duties comprised in the teaching of vocal music, harmony, pipe organ, and piano tuning, which had been provisionally assigned to three non-resident teachers, who only devoted a small portion of their time to the work, were combined in one teacher. The teaching staff of the musical department now comprises the male teacher, whose duties are above detailed, and three female teachers. The number of pianos and reed organs on hand were reported to be insufficient for the instruction of the increased number of pupils in attendance, and such addition was made to the number of these instruments as the appropriation would admit of. In this respect, however, the equipment is still rather deficient, and it is recommended that an appropriation be voted to increase the stock.

Now that the number of the inmates of the institution has reached nearly 200, a figure which is exceeded in only very few similar institutions on the continent, and seeing that organ instruction now forms an important part of the musical education of the

blind, it is most desirable that a pipe organ should be obtained and placed in the large hall. For the want of this very necessary part of the equipment of the musical department, instruction has to be given on the organ of one of the city churches, a privilege which may be withdrawn at any moment. I would, therefore, strongly recommend that an appropriation be asked from the Legislature to purchase a suitable pipe-organ.

INDUSTRIAL INSTRUCTION.

I have again to make a most favourable report respecting the industrial operations of the institution, and the results of the industrial training. For the boys, basket-making, willow manufactures, and cane-seating operations are being successfully carried on; and for the girls, machine and hand sewing, machine and hand knitting, and the making up of bead and ornamental work. The staff of instructors in this department comprises one male instructor in the willow and cane-seating shop, two female instructors in the girls' department, and two blind monitorial female teachers.

At my June inspection, the Principal was authorized to distribute among the most deserving pupils in the willow workshop, a small quantity of dried willow, so that they might continue their work during vacation, and also acquire experience in dealing with the outside world in their endeavours to dispose of their manufactured wares, and, at the same time, discipline themselves in habits of industry and independence, and thus become fitted for earning a livelihood, after they finally left the institution.

The industrial instructor reported that three pupils in the willow-work department were qualified to graduate, and authority was given to the Principal to purchase for each the usual outfit of tools, etc., granted on such occasions, the cost not to exceed \$50 for each boy.

The question of granting a similar privilege to girls in the knitting and sewing departments is worthy of consideration, as everything tending to increase the means of livelihood, and, therefore, the independence of the blind, should be fostered and encouraged. The drawback in this case is that no revenue whatever is received from the sewing department, and that the money earned for the knitting of socks and mitts is paid directly to the girls doing the work. I recorded the opinion that it would be better to open an industrial account for these departments, in the same way as is done in the willow-work shop, and pay into it all amounts earned by the girls for knitting, etc., and draw therefrom the money necessary to furnish an outfit in the shape of a knitting or sewing machine to graduating pupils. Should such an arrangement be feasible, a reasonable amount could be allowed to the sewing department, chargeable to maintenance account, for the household sewing and other work done for the benefit of the institution.

INSPECTIONS.

During the twelve months under review, three official inspections were made, on which occasions, in addition to informing myself as to the working of the educational department, a careful inspection was made of the premises, and the general management of the affairs of the institution.

The first inspection was made on the 15th and 16th of March. An examination of the register shewed that since the opening of the session on the 10th September, 1879, 176 pupils had been admitted, but that, for various reasons of a domestic character, 10 had subsequently been returned to their homes, leaving 166 pupils in the institution at the time of my visit, of whom 86 were males and 80 were females. All these inmates were seen either at their meals or in the class or work rooms. Their appearance was, on the whole, satisfactory, as, with few exceptions, they were well and comfortably clad. Respecting their health, I found, from the entries in the Physician's register, that a good deal of sickness had prevailed during the winter, the ailments being chiefly measles, scarlet fever, and colds. During the six weeks preceding my visit, 20 cases of measles and 6 of scarlet fever on the male side, and 17 cases of measles and 2 of scarlet fever on the female side, in all 45 cases, had been treated. The epidemics were, however, of

a mild form, as at the time of my visit none of the boys were in bed, and only 3 of the girls.

The institution was in a most commendable state of cleanliness, order and neatness. The dormitories and the beds therein were neat and tidy. The class-rooms were also in good order, and had a cheerful and comfortable air. The condition of the laundry and culinary department betokened good management and discipline on the part of the house-keeper. There were, however, certain structural defects, particularly in the condition of the corridor floors and the steam-heating apparatus, which, with other things to be mentioned hereafter, require early attention.

An appropriation of \$1,895.88, on capital account, having been made by the Legislature at its last session, the requirements of the institution were fully discussed with the Principal, and the following works and expenditures were authorized :—

Furniture and furnishings, as per requisition	\$752 00
Industrial outfit	200 00
Musical instruments and equipment.....	500 00
Road construction, trees, shrubs, and general ornamentation.	150 00
	<hr/>
	\$1,902 00

The attention of the Principal was called to the report of the oculists, Drs. Reeve and Alt, who, a short time previously, had made an examination of the pupils, and to the fact that the consent of the parents had to be obtained to allow certain of the pupils to be placed under special treatment. The result was that 11 of the pupils were sent for treatment to the Eye and Ear department of the Toronto General Hospital.

The Bursar was instructed to make certain alterations in the pay-list, for which authority had been given in the Supply Bill passed by the Legislature.

The institution was again inspected on the 14th and 15th June. No new pupils had been admitted since the date of my previous visit, but 1 had been sent home ill, 1 had left the Province with his parents, and 3 had been recalled home for domestic reasons, leaving 171 pupils on the register. Of these, however, 11 were at the Andrew Mercer Eye and Ear Infirmary in Toronto, where they had been sent for the purpose of undergoing operations and special and continued treatment, with a view to the restoration of sight. The actual number in residence was therefore 160.

A very minute examination was made of the register, and information was obtained from the Principal regarding each pupil. It appeared that there were under instruction no less than 48 over-age pupils, or rather more than 25 per cent. of the total number admitted during the session. This appears to be a large proportion, but it was expected, when the institution was opened, that, for the first few years, a much larger number of over-age pupils would have to be admitted, until those whose education in ordinary schools had been prevented or interrupted by blindness, had all, in some degree, participated in the benefits offered by the institution. It is to be hoped that when two more sessions are passed, the education of the largest proportion of these over-age pupils will have been completed, and that the admissions will in future be confined to blind persons under 21 years of age.

The Principal submitted to me a list of the 48 over-age pupils, which was transmitted to the Government. For reasons given by him in each case, he was authorized to re-admit 38 of these pupils, also 1 from the Province of Quebec, upon the terms named by me; and special admission for another session was also granted to 3 other pupils.

The Principal was requested to try to obtain definite information regarding the number and names of blind children, of school age, who had not up to that time received the special education which, by reason of their infirmity, they required. To this end, he was authorized to follow the plan adopted by the Superintendent of the Institution for the Deaf and Dumb, for a similar purpose, namely, to issue a circular to the school-teachers in the various school sections of the Province, asking them to send him the names, addresses, ages, and other particulars of any blind children within their respective districts. These teachers, from their communication with the heads of families, and their general know-

ledge of the residents in the locality in which they are placed, should be better able to give the desired information than any other persons who could be applied to.

Applications are constantly being made to the Principal to allow the pupils to give exhibitions of their skill in industrial pursuits, and of their proficiency in music, at entertainments given for the purpose of raising money for churches and charities of various denominations. As the parents of many of the pupils object to their children taking part in these exhibitions, and as either all or none of the applications must be granted, the Principal has been informed that, in future, the pupils cannot be allowed to perform at any entertainments of the kind referred to.

With few exceptions, the building, in all its departments and surroundings, was found in a satisfactory state. The chief exception was the coal-shed, which was so dilapidated as to be unfit for use. An appropriation will be recommended for a new shed, to be built of brick. The Principal stated that there was a want of sufficient music rooms, and recommended that one of the large rooms should be divided into two. This he was authorized to do.

In addition to the works which, at my previous inspection, I had authorized to be carried out on capital account, I now gave sanction for the construction of a new approach to the main road to the institution,—an opening for the purpose being made in the fences of the side road,—together with gates, sidewalk, etc.; also for alterations to the hot-water boiler as per specifications.

As the works of the industrial department did not shew the amount and value of the work done by each boy in the willow-shop, the Bursar was instructed to provide a proper book, and the Principal was instructed to see that the same was properly entered up at the end of each month, and for that purpose that a blotter should be kept in which the daily work of each boy should be entered. A similar record was instructed to be kept of the knitting done by the female pupils.

The Principal reported that the coal delivered under contract was of inferior quality, and he was requested to test it thoroughly and report the result to me.

As the Biennial Convention of the Instructors of the Blind was to meet at Louisville in August, it was considered desirable that the Province should be represented, and the Bursar was authorized to advance to the Principal \$100 on account of his expenses in attending the Convention, the Principal being also instructed to visit and report upon any institutions for the blind which might be on his route.

My third and last inspection was completed on the 23rd September. The current term had just opened, on the 9th September, and 174 pupils had been enrolled, being the largest number which had been under instruction at any one time since the opening of the institution. The prompt arrival of so many pupils shewed, in a very marked manner, the growing appreciation of the merits of the institution. Eighteen pupils (10 boys and 8 girls) entered the institution for the first time, all except one being of proper school age. Of the whole number of pupils, 85 were males and 89 were females; 29 were Catholics and the remainder Protestants. Only 2 were coloured. Thirty were orphans who were being boarded and clothed at Provincial expense; and 12 were children of indigent parents, and had to be assisted in respect of travelling expenses and clothing.

The appearance of the pupils was very satisfactory; with few exceptions they were comfortably clad, although in some instances proper change of clothing had not been sent with the pupils. Generally speaking the pupils had entered in very good health, all being free from cutaneous or infectious disease. Every room in the building was inspected, and the entire premises were found in excellent order.

A few articles of furniture and furnishing were still wanted, and, with a view to obtaining the requisite appropriations, the Principal was instructed to furnish a list of them, under the headings, "House Furnishings," "Educational Equipment," and "Structural Fixtures." The Bursar was authorized to purchase, on the requisition of the Principal, materials for Sunday dresses for the orphan pupils.

The estimates and expenditure were fully gone into, and some changes were determined upon, for which an appropriation will be recommended.

As the Principal is responsible for the industrial operations and the character and

quality of the articles manufactured, the purchase of the necessary raw material was placed under his direction.

The Principal was also authorized to have storm-sashes placed in the windows of his residence, the cost not to exceed \$100.

The Bursar was instructed not to charge to "Books, Apparatus, and Appliances" articles required for the industrial employment of the pupils, as such articles ought to be paid for out of work-shop funds.

MAINTENANCE EXPENDITURE.

The cost of maintaining the institution for the official year ending 30th September, 1880, is exhibited in the following statement, together with the annual cost per pupil, viz :—

HEADINGS OF ESTIMATES.	Aggregate Cost.	Cost per Pupil.
	\$ c.	\$ c.
Medicines and medical appliances ..	84 47	0 49
Butcher's meat, fish, and fowl	2643 01	15 63 $\frac{1}{2}$
Flour, bread, and biscuit	1383 79	8 18 $\frac{1}{4}$
Butter	1118 46	6 61 $\frac{1}{2}$
General groceries	2238 29	13 24 $\frac{3}{4}$
Fruit and vegetables	165 27	0 97 $\frac{1}{4}$
Bedding, clothing, and shoes	314 79	1 86
Fuel	3330 60	19 70 $\frac{1}{2}$
Light	1400 36	8 28 $\frac{3}{4}$
Laundry, soap, and cleaning	247 95	1 46
Furniture and furnishings	235 51	1 39 $\frac{1}{2}$
Farm-feed and fodder	640 27	3 78 $\frac{3}{4}$
Repairs and alterations ...	737 32	4 36
Advertising, printing, stationery, etc.	615 98	3 64 $\frac{1}{2}$
Books, educational apparatus, and appliances	1028 33	6 08 $\frac{1}{2}$
Miscellaneous	688 59	4 07 $\frac{1}{4}$
Salaries and wages	13470 33	79 70 $\frac{3}{4}$
Daily average number of pupils, 169	30,343 32	179 51

REPORT OF THE PRINCIPAL FOR THE YEAR ENDING 30TH SEPTEMBER, 1880.

J. W. LANGMUIR, ESQ.,

BRANTFORD, OCT. 1st, 1880.

Inspector of Prisons and Public Charities, Ontario.

SIR,—I have the honour to present, for the official year ending the 30th September, 1880, the Principal's Report of the Ontario Institution for the Education of the Blind.

As I sit down this genial October day to write my Report, there is present with me that bleak October day, ninety-six autumns ago, when Valentine Haüy led away a blind beggar-lad from the gate of an ancient Paris chapel. As the lad and his fellow-pupils long afterwards loved to relate, it was the chapel of *Notre Dame de Bonne Nouvelle*, a quiet sanctuary off one of the great streets, and so a little aloof from the "madding crowd" of the gay metropolis. The cheery name of the chapel may have somewhat warmed the shivering waif and promised to light his sightless and friendless path. His home was hundreds of miles away in Southern France, and he had now, in the heart of the great city, desperately battled for six years against the Morgue. But in this quiet church there was another charm which would strongly draw him—it had a famous organ famously played, and more than all, the organist, Chauvet, was blind. After long and weary waiting at *Bonne Nouvelle*, the good news did come at last to poor Le Sueur, and through him to all his companions in misfortune. The message was brought by Haüy, who is, therefore, now called in France and elsewhere "The Apostle of the Blind." The first remove was auspiciously made from the gate of *Bonne Nouvelle* to the school in *rue Notre Dame des Victoires*. There triumphs were won which are not commemorated among the statues beneath the gilded dome of the *Invalides*, nor does their hero repose in a vast sarcophagus. No: we must put behind us the *Invalides*, and, near by, enter a less ambitious edifice. Up there, in the tympanum over the entrance, we see in bas-relief a group of blind children, led by Haüy's hand from victory to victory; and these not such poor victories as Austerlitz, Wagram, and the other half-dozen butcher's bills charged against Napoleon on the pavement around his tomb. The touching story of Haüy's unselfish devotion to the blind; his boundless enthusiasm in their instruction; their frequent murmurings and ingratitude; his personal privations; his neglect at Napoleon's hands; his royal reception by Alexander I. at St. Petersburg; his return to Paris, after illuminating Europe with light-houses for the blind—all this deserves to be better told, and told frequently, for the world is still full of neglected blind; but the world does not abound in philanthropists.

With us, however, at present the most urgent matter is to apply to the advantage of our own blind folk the experiments of Haüy, and the experience that has since accumulated. The first experiments were made under peculiar advantages that would be rare in their concurrence. If we would catch Haüy's inspiration, let us for a moment breathe the feverish excitement of the century that had just witnessed the English Revolution, and that was ripening for two other revolutions—the American and the French. The genius of Inquiry had broken loose, never more to be recaptured. Never before had men's minds been so receptive of new ideas. During this period of nervous exaltation, a theory of universal benevolence was proclaimed. The vocabulary of the French language was not sufficiently responsive to this new impulse, and so, in 1725, the Abbé de St. Pierre deliberately framed the special word "*bienfaisance*" (beneficence). The most unlikely and grotesque subjects became inoculated. Even the gruff old tyrant, Marquis Mirabeau, who begat the great Tribune, and educated him by *lettres de cachet*, set up for a philanthropist, and published himself as "The Friend of Mankind" (*l'ami des hommes*). The intellect as well as the emotions became engaged. Locke, in his *Essay on the Human Understanding*, had let loose a queer question which ever since had been running wild—whether a man blind from birth, if suddenly given sight, could distinguish a cube from a sphere, both being of a size and standing together. Locke and his friend,

Molineux replied, nay. The *Essay* appeared, though an abridgment, in French, even before it was published in England, for its author was then (1687) a political exile. Early in the new century, a sightless mathematical wonder, Nicholas Saunderson, appeared at Cambridge, and achieved such distinction by his lectures that Newton—"the incomparable Newton" as Saunderson calls him*—asked him to undertake the exposition of the *Principia* and the *Optics*. While Saunderson was still the lion at Cambridge, the eminent surgeon, Cheselden, succeeded in giving sight to a boy born blind, and then fourteen years old. The boy was at first unable to recognize by sight the objects that were most familiar to his touch, and Cheselden carefully recorded the growth of visual interpretation. French *savants* were profoundly interested in the psychological questions arising out of these events. Condillac took up Locke's conundrum and the experiments of Cheselden, and discussed with great dialectic skill the mental process of the blind (*Essai sur l'origine des connaissances humaines*, 1746). Next year appeared in Dublin an interesting biography of Saunderson, from the hand of "his friend and disciple," Inchlif or Hinchliffe. His book furnished details of the appliances used by the blind mathematician, and it was most eagerly read in France. A copy fell into the hands of Diderot, then on the alert for philosophical sensations. With his graceful pen, hitherto scarcely known in France, he threw off the memorable "Letters on the Blind for the use of the Seeing," (*Lettres sur les aveugles à l'usage de ceux qui voient*). Paris was soon as much interested in the blind man of Puisaux as the England of thirty years age was in Charles Dickens' sketch of Laura Bridgman, Dr. Howe's famous blind-deaf-mute pupil. Diderot's fame was established at a stroke. The letters secured for him not only fame, but also three months' imprisonment in Vincennes. I have read his *brochure* over and over again, in the vain hope of discovering what in it excited the irascible government of Louis XV.; what possible pretext the "Well-beloved" or his minions could find for such an outrage. It may really have been, as the historian Buckle suggests,† that the bat-eyed government of Louis XV suspected, in the mention of blindness some allusion to themselves! What interests us most is, that Diderot's imprisonment was working out the deliverance of the blind. But for this occurrence it is very doubtful whether this Report of the Ontario Institution for the Blind would have been required before A.D. 1980. The popular interest in the *Letters* had already been running high; but, when an obstruction was thrown across the current, the interest instantly swelled and leaped up into wild enthusiasm; the feeble barrier burst; Diderot and a torrent of Revolutionary schemes were set free! While still in prison, this involuntary champion of the blind was visited by Rousseau,—the notable Jean Jacques,—who was presently to become a chief sorcerer among unquiet minds, and the very master-spirit of the Revolution. Hitherto the blind had been regarded merely as interesting subjects in psychology. Locke, Condillac, and Diderot had not got beyond this phase; but Rousseau asked the more direct question, what can we do to alleviate the lot of this afflicted class; above all, how shall we apply to their education the results of all your metaphysics? He suggested the embossed books that we use to-day. By his eloquent tenderness he softened down human selfishness; and, what would have been thought past all belief, he made the age of Louis XV. memorable for its schemes of philanthropy! Under his marvellous pen, France was wrought up into such sympathetic mood with afflicted humanity, that the education of both deaf-mutes and blind passed rapidly through the transition stage of private effort, and became an essential part of state administration. Finding himself famous through his acquaintance with the fortress of Vincennes, Diderot again tempted the government, though unsuccessfully, by publishing his *Letter on Deaf-Mutes*. As his Letters on the Blind were to become Haüy's manual, so this letter set the Abbe l'Epée to work among the deaf and dumb. Among the most frequent visitors at l'Epée's school, was Haüy, and thus a romantic friendship arose between the pioneer of sign-language for deaf-mutes, and the pioneer of education for the blind. Many years afterwards, there met at the Scientific Congress of Liège, l'Epée's most accomplished pupil, Massieu, and Haüy's distinguished pupil, Rodenbach, who rose to be a Belgian statesman of great

* Algebra, Book IX. § 378.

† History of Civilization in England, Vol. II.

influence. Rodenbach maintained before the Congress, that the lot of blind persons is more fortunate than that of deaf-mutes, while the deaf-mute, Massieu, sought to establish the better fortune of his own class.

In 1784, an accomplished blind *pianiste* suddenly rose upon the musical world. Mlle. Paradies, a young Austrian, blind from infancy, had, from very tender years, been carefully instructed in the piano and organ, and now, conducted by her mother, she was making the grand professional tour. After charming the courts of central Europe, she entertained Carlton House and Windsor Castle. She finally ventured on Paris, and there achieved her most brilliant triumphs. No one was more enthusiastic than Haüy, in whose mind the music of blind performers had hitherto been associated with the sorrowful exhibition at the *Café des Aveugles*. There, for the diversion of idlers, eight or ten blind men stood on a platform, goggles on nose, mock music before their sightless eyes, and made "a discordant symphony" which excited the boisterous and heartless mirth of the audience. Haüy tells us that he turned aside from this sad spectacle with a bitter pang, and at that instant for the first time the question floated through his mind: cannot these poor unfortunates be educated by substituting touch for sight? Soon after, the brilliant and accomplished Paradies arrived in Paris, and the memory of the *Café des Aveugles* troubled Haüy with accusing force. His mind full of these thoughts, he walked towards the old chapel of *Bonne Nouvelle*, and there met a blind beggar-lad. From that hour the work began.

To understand the present state of any soil we must learn something of the previous husbandry, and though we have improved the implements, the experiments of the early pioneers are still full of instruction. In this Institution we still retain the old and convenient distinction of work into literary, musical, and technical.

Literary Department.

The hope was at first entertained that a considerable proportion of the blind, if fairly educated, could live by brain-work of some sort. Literature, it was argued, is a means of livelihood to many seeing persons, to some even a source of affluence; why should not authorship yield a revenue to the blind, who have in many instance shown themselves highly gifted? To this question, which is still frequently asked, the sufficient answer is, that if blind writers produce distinctly meritorious work, the reading world will find it out and reward it. But an Institution for the Blind, no matter how high its curriculum, could not undertake a school of authorship any more than a collegiate institute or a college would be justified in doing. By no canon of criticism could we identify authors in embryo, and the history of literature supplies on every page instances how even the most sagacious teacher may be misled either into undue hope or unnecessary despair. Journalism is the most accessible form of literature; laborious search is not expected of it, nor are severe rules of criticism applied to its literary form; yet able journalists are by no means abundant. An American school of journalism was some time ago projected for students possessed of sight, but the school is already defunct. Artistic writing is really as much the outcome of natural gifts as successful composition in music, or successful composition in marble or colours. Then, over and above all this, we must not, while training the blind, imitate the vice of modern educational systems, and neglect or even postpone the training of the *hand*. It has been the wise practice of the House of Brandenburg to instruct each of its princes in a trade. The Emperor William often shows, with pride, mechanical triumphs executed in wood or metal by his grandsons, and by the Crown Prince their father. By a strong infusion of practical handicraft the German family hope to avoid what Professor Huxley lately called "*lopsided men*." It is, however, all-important that we should cultivate the *general intelligence* of the blind; for, under this stimulus, the hand responds much more readily to technical instruction of any kind. This receptive condition of the blind child's intellect can obviously be induced in two ways, which we constantly combine: 1st, by reading and oral instruction; 2nd, by furnishing embossed books to the blind for their own perusal. For both purposes an extensive library is necessary, and it should be constantly kept up to the literary and scientific standard of the time. The silent influence of books is inconceivably great.

Even every well-appointed convict prison in our time has its library, and the softening influence of literature is visible even when men are at their worst.

The embossed books used by our pupils comprise, besides school-books and devotional works, the following representation of English Literature:—Shakspeare's *Hamlet*, *Macbeth*, *King Lear*, *Julius Cæsar*, *Merchant of Venice*, *Midsummer Night's Dream*; Milton's entire Poetical Works; Bunyan's *Pilgrim's Progress*; Pope's *Essay on Man*; *Essay on Criticism*, *Rape of the Locke*, and selections; Byron's *Prisoner of Chillon*, *Hebrew Melodies*, and *Child Harold*; Scott's *Marmion* and *Lady of the Lake*; Tennyson's *Enoch Arden* and *Dora*; Dickens' *Cricket on the Hearth*, *Child's History of England*, and *The Old Curiosity Shop*; selected poetical works of Goldsmith, Gray, Shelley, Herbert, and Macaulay. For these books I have drawn upon the Boston Institution, the American Printing House for the Blind (Louisville). Mr. Kneass, of Philadelphia, and the Worcester (England) Society for Providing Cheap Literature for the Blind. The fact that, after nearly a century of effort, the entire library of the blind can be enumerated in half a dozen lines of print, calls aloud on philanthropists. How does this list compare with the catalogue of the school library of any intelligent township, or with the catalogue in any well managed convict prison? Strenuous efforts are being put forth by the Superintendents of the Boston and Louisville Institutions to increase the number of embossed books. The Worcester Society, in England, has done excellent work with its slender resources, and, if properly supported, would do vastly more. Great expectations were raised by the Gardner legacy, of £300,000, but its application seems still to remain where it was left by the late Lord Chancellor. Let us hope that it will not prove to be another phase of Dickens' famous chancery suit, Jarndyce and Jarndyce. The outlook at present is bleak enough. Superintendent Anagnos, besides the embossed edition of Pope's works mentioned in the list above, and besides a volume of American prose, has during the past year projected a valuable series of historical manuals, of which the following are ready for delivery:—Schmitz's *History of Greece*, brought down to 1862, by Gennadios, Professor of History in the University of Athens; Schmitz's *Rome*; Higginson's *History of the United States*. Among the new works immediately forthcoming are Freeman's *Europe* and Huxley's *Science Primer*. Nor have the wants of younger pupils been overlooked. A reading book has lately been prepared by Mr. Lodge, for the Boston public schools, and he has taken as the matter the ever-charming stories of childhood—Red Riding-Hood, Jack the Giant-Killer, and the rest. With Mr. Lodge's permission, the Boston Institution has reproduced the volume in the embossed form, and has also embossed selections from the Arabian Nights in a form suitable for a reading-book. Our blind children read with inconceivable relish these delightful stories, which, for a thousand years, have retained unfaded all their original charms.

Mrs. Anagnos has, with great kindness, lately translated from the German, and in embossed form presented gratuitously to the blind, an interesting account of the world's famous diamonds, the Kohinoor, the Pitt diamond, and others that have shone in history as well as in caskets.

The publications of the Boston Institution are all defrayed by private benevolence; and sometimes the benefactors will not allow Mr. Anagnos to disclose their names to his board of trustees. When shall we witness in Ontario philanthropy of this unostentatious character?

The relief of these recent Boston prints is surprisingly bold; the words fairly leap from the page! The paper is made from specially selected linnen rags; and, while thin, is very strong. On the occasion of a recent delightful visit to the Institution, I was invited to examine all the details of the printing and electrotyping. A new press, appropriately named the Howe Memorial Press, has been constructed from the design of Mr. Reardon, a most ingenious blind mechanic, who resides at the Institution. Mr. Reardon had previously given proofs of his ingenuity, in a system of electric clocks which shew uniform time throughout the Institution; also in a system of electric calls, by which any officer, pupil, or servant can at will be summoned from any part of the building. Among practical book makers there is considerable variance of opinion as to the best form of press for embossing. Mr. Anagnos, discarding the cylinder, has in the new press returned to the bed and platen. It is contended that the simultaneous pressure on the whole page

gives a more uniform relief than successive tangential pressures, as imparted by a cylinder; and that in the latter case a species of ripple or after-tow in the "blanket" produces inequalities in the impression. It is interesting to note that Haüy, though using the cylinder,—somewhat after the manner, as I conjecture, of the modern "proof press,"—believed that a simultaneous vertical pressure would yield better books.* The new Boston press which is of great power, is not designed for a greater speed than eight hundred impressions an hour. For heavy and expensive stereotype castings,—a ton of type-metal to a book of a few hundred pages,—Mr. Anagnos, has substituted an exceedingly light and cheap electrotype. A wax matrix taken from the type form is blacklead, and a thin copper shell is deposited, which, after being separated from its matrix, is supported at the back by a filling of melted tin. By this electrotype process, the price of the Boston publications has recently been much reduced, while the quality of both paper and printing has been vastly improved.

At the Louisville Institution,—where, in the month of August, the Biennial Convention was right royally entertained by Superintendent Huntoon and his Trustees,—I found further improvements projected in the book-work, which already is exceedingly good. For convenience and economy, the American Printing House for the Blind is conducted within the institution walls, and it is thus under Mr. Huntoon's constant superintendence. An improved cylinder press has been found necessary to keep up with the demand for embossed books. Under the recent Subsidy Act of the United States Congress, the duty of producing and distributing annually \$10,000 worth of books and appliances devolved upon Mr. Huntoon, and even his energy must have been severely taxed. This subsidy has given a powerful stimulus to the education of the blind. Some modifications in the rules of distribution were adopted by the late Convention. Publications and appliances, other than those produced at Louisville, can now be selected to the limit of 20 per cent of the appropriation credited to any given superintendent. The choice of books is perhaps the most difficult question that can engage any educational body. The plan adopted at Louisville is ingenious and sufficiently elastic. Five superintendents are to form a publication committee, who are to send to the various superintendents, classified lists of all the books suggested for publication. Every superintendent is to designate in each subject the book that he approves, and the book receiving the greatest number of votes is to be sent to the embossing press. Then, to provide for the publication of special works, it was further resolved, that the appropriation of any Institution may be devoted to the embossing of any book selected by the superintendent of that Institution.

Mr. Kneass, of Philadelphia, has lately reprinted in raised letters *King René's Daughter*—Theodore Martin's translation from the Danish of Henrik Hertz. Iolanthe, the king's daughter, and the heroine of the play, became blind in infancy; but, under the magic spells of Moorish science, she regains her sight. To our blind pupils these hinging incidents open sympathies that make the book a frequent companion. Mr. Kneass intends, I believe, to give us Bulwer Lytton's popular play, *The Lady of Lyons*, which will also meet with a warm welcome. He entertains a design of reproducing, in embossed form, some English version of the entire *Iliad* of Homer. The wisdom of this scheme I greatly question. The work would probably occupy half-a-dozen large quarto volumes, and the ordinary blind reader would hardly work his way through the second quarter of the first volume, where the "Catalogue of the Ships" would fall due. To afford an insight into Homer's great poems, a much better plan would be to reprint those two delightful volumes of "Ancient Classics for English Readers" that are devoted to the *Iliad* and *Odyssey*, where the editor (the Rev. W. Lucas Collins) has introduced Homer's most famous passages in graceful English versions.

The Roman types used by the three foregoing publishers differ in some details, but they offer no difficulty to those of our pupils who can read line type. The Worcester (England) Society adopts a type quite resembling in form, though not in size, Haüy's early imprints; these letters are also found very legible to the finger, except in the too close resemblance of *e* and *o*.

* "Nous croyons cependant qu'une impression perpendiculaire donnée au même instant à toute la feuille, n'aurait à son foulage plus de solidité."

How great the improvements in books for the blind! Haüy's letters were fairly designed, but the mechanical execution of his books was very crude. Into an area of 50 square inches he brought 365 letters,—the American publications bring with greatly increased legibility into the same area about twice as many. Our pioneer apologized for the clumsiness of his ponderous tomes. He pleaded "our printing is still in its cradle. Perhaps some day we, like seeing folk, shall have our Elzevirs." If we yet complain of our bulky books, let us thankfully remember that they have shrunk to less than one-half their former size. How old Haüy's heart would gladden at the early fulfilment of his prophecy!

In the choice of books for relief-printing, I would urge upon our publishers that they do not multiply conflicting class-books on such subjects as grammar, arithmetic, and spelling; but that large additions be made in books of more abiding interest,—works in literature and history, or works illustrative of these subjects. In my last Annual Report I cited encouraging examples of blind poets that have left their mark upon the literature of modern Europe. From time immemorial, history as well as poetry has had a fascination for the blind, and occasionally it may be said of blind historians, as Mr. Gladstone once grandly said of orators, that they have given back in a flood what they have received in vapour. Cicero tells us, as a notable event of his boyhood, that he gained the recognition of Aufidius, who, though blind reached the high offices of quaestor and praetor, and, in those days, was yet more famous as the historian of Greece. Father Charlevoix, our famous Canadian Annalist of a century and a half ago, found on visiting Japan, that the state maintained a regular faculty of history, composed of blind men, whose memory was made the muniment room—probably also the lumber-room—of the national records. It may be, as it is usually alleged, that Milton was turned aside by failure of sight from his design of completing the History of England; but, judging from the sample he has left, we have made an exceedingly good exchange in *Paradise Lost*. Within our own century we can find examples that are full of encouragement to ambitious youth. The American historian, Prescott, lost his sight just as he had gathered the raw material for the first of his Spanish histories; but he dared to go forward; and, after ten years' further toil, all the world was reading his *Ferdinand and Isabella*. Another decade brought forth, though with more aid from his sight, his *Conquests of Mexico and Peru*. The fatal paralytic stroke came to him in his library chair while engaged on *Philip II*. Augustin Thierry, the eminent historian of the Norman Conquest, wrote in darkness all his historical works, except the first. His brother Amédée, also an historian of eminence, was afflicted with the same privation, but was endowed with the same literary taste that Augustin so touchingly described as his constant solace. The late Viscount Cranborne (eldest son of the Marquis of Salisbury) was blind from childhood, but was quite remarkable for the range and the variety of his scholarship. His *History of France for Children*, followed by the *Essays and Historical Sketches* raised high hopes, which unhappily were blighted by his sudden taking off;—a serious loss to the blind of England, whose cause he had made his own.

In point-print books for our literary classes, I regret that I have this year no new publications to report. This Institution, in common with almost all other American Institutions for the Blind, employs the New York point system. The adoption of the Braille system, as employed in France, seems, independently of its intrinsic defects as a tangible alphabet, to be altogether out of the question. The exposition of the French system, as laid before the Paris Congress of 1878, and since published by the French Government,* will, I suppose, be accepted as authentic. Well, the system, as now used, embraces the following symbols to designate peculiarities occurring in the French language: 1st, letters marked by the *trema* or by accents; 2nd, prefixes and terminations common in the French language; also, 3rd, words in frequent use, making a total of about 150 symbols, which are additional to the digits and to the letters of the alphabet. Now, in this immense number of symbols, Braille and his editor, Ballu, have really exhausted all the useful combinations that the Braille system admits of; and on the ground of uniformity, which is the strong plea for the general use of the system, it is obvious that these symbols,

* Anaglyptographie et Raphigraphie de Braille. Paris, 1880.

already appropriated to a special significance in France, cannot be made to signify something else in English or German. It was hoped that an international code of letters and word-symbols for the blind was found in the Braille system, but the hope is evidently delusive. We could reach such a result by only one path: translating into point characters all the possible elementary sounds of the human voice; as, for example, they are represented in Prof. A. Melville Bell's "Visible Speech;" but phonetic reform has not yet reached a point where this would be practicable. Until the world insists upon representing the vocal essence of a language instead of its mere conventional form, we cannot have a universal alphabet for either blind or seeing. Phonetic spelling is, however, making its way, and we are apparently on the eve of a great revolution. Some of the public journals have lately been using such forms as *program*—which is already recognized by so accurate a scholar as Mr. Skeat in his *Etymological Dictionary*—and *catalog*, which has the justification of the German form. But the English Philological Society goes vastly farther. That learned body, whose head quarters are at University College, London, and which reckons among its leading spirits such names as F. J. Furnivall, the eminent Shakspearean scholar, has already adopted such changes as *iland* for *island*; *foren* for *foreign*; *rein* for *reign*; *feeld* for *field*; *ake* for *ache*; *ov* for *of*; *traveler* for *traveller*; *ar* for *are*; *giv* for *give*; *cum* for *come*; *du* for *due*; *lookt* for *looked*; *tugd* for *tugged*; *er* for *re* (in *centre*, etc.); *driven* for *driven*; *promis* for *promise*; *forfet* for *forfeit*; *hight* for *height*; *o* or *e* for *eo* in *people* (*peple*), *jeopardy*, *yeoman*, etc. These apparently startling changes are really in most cases only restorations of the old and simpler spelling, from which, on a sorrowful day, our forefathers strayed, leaving their posterity to wander up and down in the wilderness these four hundred years or more. To the blind, in a much greater degree than the seeing, these changes are important, spelling is so difficult without sight, and space is so valuable in embossed books. At the Louisville Convention, a committee was appointed to report on the whole question at our next biennial gathering, which is to be held in August, 1882, at Janesville, Wisconsin.

Meanwhile our publishers ought surely to be issuing some fresh books in the New York point letter, which was definitely adopted nine years ago, by the Convention of Indianapolis. We urgently need a graduated series of reading-books, which had better not reproduce anything we have now in Roman letters. The existing readers are already so familiar to blind pupils that point-print versions of these books would certainly be read rather from memory than touch. For more advanced students, a transcript of Macaulay's *Essays* would be found very appropriate. If a little more help were provided within this Institution, I could put to excellent use a small Gordon printing-press. More than two hundred blind youths now annually pass through our hands, and their educational wants are very varied. Special printed lessons would often prove of great service. In training the fingers of blind children to read, their strength of memory is a great impediment. In many cases a single perusal of a page transfers it so completely to the memory that any further training of the fingers on that page is useless. The blind child's fingers are not the source of information on which he now depends, and they wander aimlessly over the page. In a recent letter to the *Athenæum* (March 6th, 1880), Dr. Monier Williams, the eminent professor of Sanskrit at Oxford, affords an extraordinary instance of this cultivation of memory in the blind pandit Gattu-Lalaji, who, at eight years, had lost the sight of both eyes, through smallpox. "During one of my visits to Bombay, he called on me, accompanied by three amanuenses, and requested a trial of his powers, declaring himself capable of composing six sets of extemporaneous verses, simultaneously, on any six subjects, and in any six metres I liked to select. I proposed three subjects—a description of Bombay, the advantage of Sanskrit learning, and the advent of the Prince of Wales to India—naming at the same time three of the most difficult metres I could remember. Without a moment's delay, the pandit dictated the required verses to his scribes, with wonderful precision and rapidity. He also conversed fluently in Sanskrit, and impressed me very favourably with his finished scholarship and the extent of his literary acquirements. The blind pandit's successful *tour de force* in my presence was doubtless more due to great powers of memory than to poetical genius."

Of Dr. Moon's publications the Institution has only a limited supply, but the books are in frequent use. One of the older pupils, who, with his sight, lost also his left arm,

has lately received from H. R. H. the Marchioness of Lorne a kind gift of the *Gospels* embossed in Moon's characters.

In my last Report I represented the cruel disability to which blind readers in Canada were then subjected by the Customs duty on embossed books. Mr. Paterson, our eloquent representative in the Commissions, took up the question during the next session, and made a powerful appeal for the relief of an afflicted class, whose burden is already so grievous to carry. The Honourable Edward Blake also kindly gave the blind of Canada his powerful advocacy. The House showed itself responsive to these stirring appeals, and the Premier announced the good news that henceforth books embossed for the use of the blind will be admitted free.

For pencil-writing we generally use the grooved card. The "automatic" indelible pencil that has lately become so popular would serve a good purpose in blind-schools, if its price were well reduced. Ink cannot be used without sight, and ordinary pencil-writing soon becomes blurred and illegible. Blind authors have resorted to various expedients. Prescott was advised by Thierry, his brother in affliction and in historical tastes, to *dictate* his manuscript, but Prescott would sturdily draft his own. He procured in London, a writing-case, consisting of a frame traversed by brass wires corresponding in number to the designed lines of writing. The paper was covered by a carbonised sheet, such as we still use for duplicating, and both were secured together beneath the wire grid-iron. The historian then used an ivory or an agate stylus, and the writing appeared on the lower sheet as hieroglyphics, intelligible to his secretary,—and often to no one else. It is interesting to remember that Prescott's Secretary, Mr. John Foster Kirk, has himself since become a distinguished author, and the historian of *Charles the Bold, Duke of Burgundy*.

Our blind writers, when they intend their manuscript to be legible to themselves, and to one another, use point characters. But just here arose a great obstacle. Hitherto it has been necessary for the blind writer to indent the dots on the side of the paper reverse from that on which his fingers would read it; also, as in reading he proceeds from left to right, so in indenting he must take the opposite direction, and form the characters from right to left. Then if he desired to examine any word or sentence already written, he must detach the paper from the frame in which it was secured, release it from the embrace of the "guide," turn it over, read it with the fingers, and restore it to its first position. In mathematical problems, where each stage of the work is deduced from some preceding stage, or from the hypothesis, the difficulty became insuperable. Ever since my first acquaintance with school-aparatus for the blind, I felt satisfied that before point characters could receive their full application, some simple mechanism was necessary whereby the blind could write on the same side of the paper that they read,—in other words that what we required *was not an indenting, but an embossing appliance*. In nearly all my Reports I have discussed this question, and from time to time, I have indicated the progress of my experiments. Happily, this year, the embossing guide has passed the experimental stage, and after availing myself of the criticisms and suggestions of our most experienced and successful teachers, I have introduced it into all branches of class-instruction. This embossing guide,—which so far as appears from the bibliography of the blind, is the first that has ever either been devised or suggested,—consists essentially of two metal plates, each one inch by eleven. The upper plate is punched into three rows of cells, bearing a very exact mathematical relation to each other, and may for convenience be called the "cell-plate." The lower or "bed" plate bears on its surface a number of conical points about a 1-20th of an inch in height; and these points are so disposed that, when the two plates are made coincident, four points of the lower plate appear in the four angles of each cell in the upper plate. The stylus resembles the barrel of a watch-key; the cavity, however, not being square, but conical, so as to conform to the shape of the points on the bed-plate. The formation of these points has been a matter of prolonged experiment. In my first experiments I drove into the bed-plate, pins, so as to occupy the four corners of each cell. In the next model, which I had made in Toronto, I had the points spun on a sheet of copper, which was afterwards soldered to a brass plate. But this appeared too tedious. I therefore set about casting the bed-plate, points and all, in type metal. But when I had fairly succeeded with my castings an unexpected difficulty arose. I found that

we could not succeed in making our cell-plates exactly alike, *i.e.* when a number of plates are stacked up, their cells do not *exactly* coincide. Mr. Harrison, our engineer, has by his ingenuity gradually reduced this error, so that now it has all but disappeared, and the method of casting, as being much more expeditious, will again be tried. Meanwhile I have fallen back on the second method, and Mr. Wickens has closely studied the best mode of spinning* conical points on copper plates. The following is the process that is at present pursued, by which 200 perfect points can be spun in less than a quarter of an hour. A strip of copper, toughened by heating, is covered by its intended cell-plate and both are well secured to a strip of sheet lead. A shouldered steel point having a velocity of over a thousand revolutions a minute is, by a foot-lever, brought down in each of the four corners of every cell, and the copper is thus, without breaking, spun into the conical points required. The strip of copper which now bristles with points is soldered to a back of rather heavy brass plate and the points are at the same time filled with liquid solder. This bed-plate finally receives two posts, which pass through the cell-plate, and one of which allows the cell-plate to be released and revolved around the other post as a pivot. I submitted this educational novelty at Louisville, for the opinion of the Convention, and it was most favorably received. At this Institution we do not of course manufacture appliances for sale, but I have sent to Boston, Louisville, and Philadelphia samples of our earliest though somewhat imperfect efforts, and I have furnished such directions as will enable the publishers for the blind, at those points, to make the embossing guides for Institutions requiring them.

In my last Report I described a variety of elaborate mechanisms designed to expedite blind writing. The Braille-Foucault apparatus is one of the earliest, and it is made the subject of instruction in some Institutions. In spite of its laborious process of constructing tangible Roman letters, I find it stated in a recent French publication that eighty Alexandrine verses,—say two pages of a well-printed English octavo,—can be embossed in an hour. Its price used to be given at from \$12 to \$16, but it is no longer quoted on the announcements of the Paris Institution.

At the Louisville Convention Mr. McElroy exhibited an ingenious and compact needle-writer for New York point characters. There is a key-board, containing six keys, separated by a spacing key into two sets, each of three. These six notes actuate as many needle-points in the six different positions that a dot may occupy in the New York point system. A convex table of sheet iron carries the paper that is to be indented,—a transverse slot dividing the sheet-iron into two equal parts. This slot is surmounted by a metal arc, having a groove on its under surface. Against this groove the indenting needles play as the keys are struck. This ingenious mechanism has distinct advantages over all the type-writers for the blind that I have yet seen. It shares the disadvantage of all indenting machines, in proceeding from right to left; but the manuscript already written is accessible to the finger, except the line actually being written. The whole mechanism does not occupy more room than an ordinary dressing-case, and the price is at present placed at \$18. The inventor, Mr. McElroy, has been appointed superintendent of the new State Institution for the Blind, established this year at Lansing, Michigan.

Hitherto the least satisfactory appliances for the blind have been in the department of mathematics. Two centuries ago, at Geneva, the eminent mathematician, James Bernoulli, succeeded in teaching his favorite subjects to a blind girl, and he left a small Latin tractate explaining his methods of instruction, which included the use of tangible numerals. His suggestions were not at that time followed up. Euler, like James Bernoulli, a citizen of Basel, was a pupil of John Bernoulli, and was doubtless quite familiar with the system recommended for blind mathematicians by John's elder brother. Yet, when Euler became totally blind, he at once and wholly threw himself upon his memory. By way of severe introductory discipline, he dictated to a servant, who at first did not understand a single mathematical expression, his celebrated treatise on algebra, and when he succeeded in making his ignorant servant understand the Diophantine Analysis, he felt assured that he had made his algebra generally intelligible. He also

* Since the above was written, we have succeeded in making very satisfactory points by the simple use of a minute punch and die; and altogether we have much improved the whole appliance.

used his memory as the main resort in his profound researches into lunar perturbations. Euler's memory acquired marvellous power; one of his minor feats was committing Virgil's *Æneid*, and telling the first and last lines on any page of his copy. His easy recollection of the most complicated mathematical formula and calculations would have filled with envy even the late Professor De Morgan, who, however, was not necessarily dependent on his memory, but had the excellent use of the left eye. In the year that Euler was born, Saunderson began his brilliant lectures at Cambridge; and, just as Saunderson's life was ebbing away, Euler's fame was rising like a flood, bearing him towards St. Petersburg as the guest of the great Catharine, and towards Berlin as the familiar friend of the great Frederick. Though Saunderson astonished England by his extraordinary powers of memory, he often called to his aid the suggestions of James Bernoulli. He constructed a calculating board, which proved to his contemporaries a great subject of interest and mystery. But, if we place together the accounts given in Hinchliffe's Biography and Diderot's *Lettres*, its construction and use become intelligible enough. A framed pine board, about a foot square, was divided into small squares, having holes drilled at their angular points and at the intersections of their diagonals. Pegs, with heads of two sizes, were inserted in various positions, and the squares, thus distinguished, made out the ten numerals. Saunderson's board probably suggested the arithmetical honey-comb, and the numeral cubes still used in many schools for the blind. A little consideration will make it evident that if Saunderson's system of fixed squares, with movable pegs, were transformed into a system of movable blocks, it would be equivalent to using the upper faces of four different cubes, or the upper and lower faces of two different cubes. Or, better still, we may use both ends of a single pentagonal block, the ten different attitudes of the pentagon yielding, as in the Kley and Taylor appliances, the ten numerals. In the celebrated board above noticed, the blind mathematician carried silk threads around the pegs to represent mathematical figures.

Saunderson, by incessant practice, acquired great speed in the use of these clumsy contrivances; but, like Euler, he depended chiefly on mental calculation, using the cubes merely to rest his mind at particular stages of the work. But the educational requirements of such minds as Saunderson's are no measure for the average intellect, and ought never to be taken as any guide in devising school apparatus for ordinary blind youth. To Newton the most difficult of Euclid's theorems was a self-evident truth; but, though we live in the full blaze of the Newtonian philosophy, the *pons asinorum* still remains a bridge of sighs to average school-boys. The walking-staff of such blind giants as Euler and Saunderson in mathematics, or of Milton in literature, would, to ordinary blind folk, be, in Miltonic phrase, "the mast of some great admiral." Even Ulysses himself did not attempt to handle the truncheon of the Cyclops; with his habitual sagacity he restricted himself to a fathom off the thinner cud. The number of mathematical prodigies among the blind has hitherto not been large. In the long records of the Paris Institution I can find only one who distinctly rose above mediocrity, though Paris has always had a strong weakness for evolving prodigies. Penjon (as he spelled his own name), or Paigneon (as Dr. Guillié spelled it), entering the Institution in 1797, shared the great mathematical advantages which were then provided for the pupils. After a course of geometry, algebra, and trigonometry, he was placed under the distinguished mathematicians, Biot and Franceur. With their assistance he attained to great proficiency in the calculus and the *Mécanique céleste*. At an open competition of the colleges in Paris, he distanced all his rivals, seeing as well as blind, and the rector of the university soon after nominated him to the chair of mathematics in the *Lyceé* of Angers. Beyond this point I have not been able to trace Penjon's career. After his appointment he disappears from view, and he failed to reach even the slight distinction of a notice in the *Biographie Universelle*.

Here it is instructive to keep before us that the Paris Institution in Penjon's time forced the mathematical pupils to rely altogether on their memory. Dr. Guillié, the director, tells us that no external aid whatever was provided. Wherever blind mathematicians have hitherto preserved any record of their researches, they have used the services of a secretary. Saunderson, with all his mental resources, never learned to write. Without writing materials, how paralysed would seeing persons find themselves, even in the simplest matters of account! This suggests what we ought to do for the blind. Until they

are provided with some near equivalent for our pencil and paper, sightless children will remain too heavily weighted for much progress. By the device of an embossing guide, I have long hoped, as explained in former Reports, to make mathematics more accessible to the blind. The experiment is now proceeding. So far as we have yet gone, no serious difficulty has been met; and the prospect is very encouraging. The embossing guide is equally available for calculation, for writing, and for musical notation. For the study of geometry I have designed a slate which will, I think, be found very helpful. A sheet of brass-plate will have its surface covered with conical points bearing the same mathematical relation as in the bed-plate of the guide already constructed, so that a cell-plate may be used for the writing of words or numbers. Accompanying the slate, which may conveniently take the form of a portfolio, will be a pair of compasses, and the usual equipment of triangles, etc. The compasses will have the limbs jointed, each limb terminating in conical depressions instead of points. If the student desires to describe a circle, resting one limb of the compasses on any given point of the bed-plate, he will take the required radius, bending the knee-joint of the other limb perpendicular to the paper, and, swinging this limb round, he will emboss the points that lie in its path. With the further aid of the triangles, he can draw the ordinary range of geometrical figures. It is obvious that he can draw in outline, maps, and a great variety of designs, if the profiles are supplied.

Musical Department.

In musical instruction the embossing guide will have an important place. It is interesting to know that Mlle. Paradies, the famous blind cantatrice and instrumentalist of the last century, used a somewhat analogous device to arrange her musical compositions. She at first tried pricking dots on paper, but the ceaseless turning and re-turning of the paper became intolerable. She then made immense pin cushions, such as lace-makers use, but quite flat. The writing was now evidently done on the same side as the reading, and in the same order. Mlle. Paradies seems never to have got beyond these expedients, which, however, she turned to the best advantage, by using a very condensed system of short-hand—the bass alone being written, and the harmony indicated by symbols, just as in our figured bass. In the Paris Institution, Haüy attempted to reproduce music for the blind by embossing it with the ordinary lines and spaces. This has also been attempted in several American institutions, and quite recently Mr. Kneass, of Philadelphia, has published some books of hymn-tunes. For legible reading the embossed copy must be on a highly magnified scale. The Paris Institution soon abandoned this plan, though it is still, or it was lately used in Haüy's foundation at St. Petersburg. The strain on the pupil's memory was found too severe to dispense with written music, and in Paris a succession of interesting experiments were tried. Rousseau's suggestions furnished a basis for one system, another was purely alphabetical, but all these were laid aside for the new point system arranged by Braille, which is still retained. This Braille system was, when first announced, an important advance, though it has been since severely criticised, even at the Paris Institution, which is ordinarily too much under the sway of tradition. Guadet, one of the most distinguished teachers there, showed very clearly in 1846, Braille's wastefulness of space, and the other defects of his system. The argument now generally urged for the universal adoption of the Braille system, is the alleged vast volume of its musical literature. But this has been grossly exaggerated. The most recent catalogue of publications in Braille music, shows fifty short pieces selected from the great composers; twelve waltzes arranged as piano duets; thirty-five more difficult selections for the piano, and a rather full representation of Bach's fugues. There are also some miscellaneous selections, and books of instruction for vocal music and for the piano, organ, clarinet, cornet, violin and violoncello. It is of course to be understood that the Paris Institution does not confine its own teaching to the above list. A printing press within its walls is constantly available for special lessons in music as well as in other subjects. But the list exhibits all the publications that are procurable by other Institutions, and in an argument against ambiguity and other inherent defects of the Braille system, such a list cannot weigh heavily. In this Institution I have adopted the New York point system of music, as arranged by Superintendent Wait,

and neither teachers nor pupils appear to find any difficulty in its use. The lessons in instrumental music are dictated by the teachers, taken down by the pupils, and afterwards made the subject of study and practice. In condensation as well as clearness, the New York system appears to be superior to Braille's notation, still there is some diffuseness. It is most unfortunate that Hany did not hand down Mlle. Paradis' system of figured bass. Her musical contemporaries extolled its ingenuity, clearness and condensation. Mr. Wait is constantly improving and elaborating his system. Perhaps he will give us as his final triumph a workable scheme of musical short-hand. His recent point version of Schumann's *Album* was a most welcome addition to our musical library. He is now engaged on a series of small manuals, illustrative of musical expressions, such as *staccato*, *legato*, *scales*, *arpeggio*, *fugue*, *rhythm*, etc. The music will be drawn exclusively from the great masters, and the series will include altogether about twenty-five books. At my recent visit to the New York Institution, Mr. Wait had sent to Louisville for publication five or six of the proposed series, so that I hope to have some of the manuals in the hands of our teachers before the close of the year. Two other additions to our store of point music are promised: Vaccai's *Vocal Studies* and Kohlen's *Piano School for Young Pupils*.

I am most gratified to learn that there is a good prospect of seeing our music hall furnished with a pipe-organ. The scheme ought to include, first, a really good instrument with two manuals, and such a full selection of stops as will thoroughly train our pupils in registration; secondly, such mechanical arrangement as will give us the motive power of the engine in the basement. I have carefully worked out all the details with our most experienced organ-builder, and I do not see how these conditions can be fulfilled for a less sum than \$3,000.* Of all cheap furniture, a cheap organ is the most expensive. It is surely not too much to ask the wealthy Government of Ontario to do for one of its great Provincial Institutions as much as any respectable town does for three or four of its churches. The practical value of organ instruction to blind students cannot be denied or disputed. In this, as in every other branch of our instruction, the experience of the pioneer Institution is invaluable. In the Paris Institution, music was at first treated as an amusement for the blind, and not as that serious occupation and prime source of livelihood that it has since become. In his earliest announcement, Hany, with a very apologetic tone, included music in his scheme of instruction. The era of piano-artists commenced with the directorate of Dr. Guillié, who cleared the foundation for his work, by weeding out unprogressive teachers and dismissing forty-three of the pupils. In the case of Sophie Osmont, he showed how the piano may become to a blind *artiste* a source of reputation and affluence. The next director, Pignier, struck into some other rich veins. He saw that in church music there was a great future for the blind, and thus came in the era of the organ. Against the virulent opposition of some of his own staff, he gave the pupil, Montal, opportunities of studying the construction of the piano; of developing a scientific system of tuning, and finally he appointed him to a position on the staff. Montal's subsequent career as one of the great piano manufacturers of Paris is well-known. To this period (1821-1840) belong Braille, Gauthier, and Moncouteau—all distinguished organists—Braille, also the arranger of the point system; Gauthier, a successful composer; Moncouteau, a valuable contributor to the theory of music. By 1840, fifty of the pupils had won their way to the organ-stool in the great parish churches of Paris, and in the cathedrals of Orleans, Tours, Vannes, and Blois. To-day more than two hundred are similarly employed throughout France. Paris has invaded even Canada. Not long since one of its pupils was a leading organist in Quebec; and now another is a leading musician in Montreal. The early successes of the Paris Institution were not overlooked by Dr. Howe, and the other American pioneers. It would now be impossible to find in the United States an Institution, half the size of our own, that remains unsupplied with a good church organ.

Montal's success in piano-tuning opened up to the blind a most productive field of labor. His lead has been well followed up in both Europe and America. The leading tuner in the establishment of Steinway and Sons, New York, is a blind German, Mr.

*The following is the inventory of the musical outfit of the Boston Institution for the Blind, as published in the Report for 1880 (p. 101): One large organ, \$7,500; three small organs, \$730; forty-four pianos, \$11,000; violins, \$100; brass and reed instruments, \$1,500; total, \$18,830.

Armin Schotte. In a letter to Superintendent Anagnos (Jan. 9th, 1880,) the Messrs. Steinway wrote: "This gentleman tunes the concert-grand pianos for the concerts at Steinway Hall, etc., which work is considered the highest achievement in the art of tuning. Mr. Schotte's tuning is simply perfect, not only for its purity, but in his skill of so setting the tuning-pins that the piano can endure the largest amount of heavy playing without being put out of tune." In Boston the official tuning of the city school pianos has for the past few years been wholly in the hands of the Institution pupils, who also largely receive the patronage of private families. The experience of our own Institution during the past year offers much encouragement. Mr. William Raymond, a former pupil, and recently our instructor in tuning, though already earning a good income from his profession, was offered still better inducements by Messrs. Mason and Risch, piano-makers of Toronto, and he has entered their service. Mr. Zinger has been appointed to the vacancy on our staff, and he combines with tuning some other branches of musical instruction that were before in separate hands. In tuning and other technical branches, it will be very important to grant a government diploma to those pupils who have completed their training, and who are recommended to the public. Our tuning class now contains seven pupils selected from among the senior students.

Industrial Department.—Boys.

Our willow-shop contains thirty-four male apprentices. A minute record is kept (daily and monthly) of all the work produced by each apprentice. The regular course of training covers at least four full sessions in the shop, successive years being devoted to tasks of increasing difficulty. About forty varieties of basket-work are made. The instruction of our blind apprentices is greatly promoted by the use of blocks, and by Mr. Truss' models, which were especially invented for our shop. During the summer vacation the senior apprentices are lent some tools and blocks and given some willow. They then take their introductory lessons in self-help and home-industry. When they have satisfactorily completed their Institution course, they are furnished with an outfit of tools, models and blocks, and a small supply of willow which will keep them employed until their own crop of willow is harvested. Three years before this final departure, they have been supplied with willow-cuttings to form the plantation from which their raw material is to be drawn when they set up for themselves. This system strictly administered has yielded most gratifying results. We have already throughout the Province a large number of ex-pupils hard at work and doing well. I make it a feature in the annual visitation of the blind to require reports respecting the old pupils. This summer the visitation was performed by Mr. Wickens and Mr. Truss, with some assistance from the bursar, Mr. Hossie. These officers collected valuable information, and whenever they crossed the track of ex-pupils, they found them well employed.

Industrial Department.—Girls.

The organization of this department has been minutely detailed in recent Annual Reports. The course of instruction embraces the cutting and fitting of dresses and clothing, household sewing and knitting, the use of the knitting machine, the use of various sewing machines with their numerous attachments, the making of head-work and fancy work in a great variety of forms, colours, and materials. In the knitting-room, the machine now chiefly used is the Franz and Pope knitter with ribbing attachment, as made at Georgetown, Ont. Our equipment numbers four machines, owned by the Institution, and eight owned by the pupils themselves. The girls have purchased them on the instalment plan, and are making their payments out of their allowances for Government knitting. The products of the knitting-room for the year were as follows:

Socks (for Central Prison, Boys' Reformatory, etc.)	3,439 pairs.
Mitts, double-knitted and hand-made	1,047 "
Stockings	323 "
Some hoods also were made.	

To adequately set forth the large volume of work done by blind labour in the sewing-room, I should have to give the articles as detailed in the official record, and thus turn my page into a series of clothes-lines. The list includes such items as 36 dresses, 77 sheets, 178 pillow-cases, besides a vast variety of general household furnishings, and an unspeakable assortment of feminine accoutrements. Canadian farmers still largely use the spinning-wheel, though of improved construction, and our girls are nearly all daughters of farmers. Miss Tyrrell has suggested that the use of the spinning-wheel should therefore be included in our scheme of instruction. An excellent suggestion, and I am now looking about for an available form of spinning-wheel.

The number of machine knitters is 34; of machine sewers 64.

Miss M. Ross, lately appointed on the staff of teachers, devotes a portion of the day to the manual instruction of her pupils,—a branch of growing interest and importance. The *unhandiness* of neglected blind children exceeds all belief.

Religious Instruction.

The pupils, both Protestant and Catholic, are conducted to Brantford on Sunday morning, and attend their own places of worship. For the guidance of the Presbyterian and the Baptist pupils, I am greatly indebted to the good offices of Mr. S.^r M. Thompson and Mr. Cox. The continued kind attentions of these benevolent gentlemen are deeply felt and appreciated. On Sunday afternoon, the Protestant pupils attend a service conducted in our Music Hall by the various clergymen of Brantford, who attend with almost unfailing punctuality. The Catholic pupils, on Sunday afternoon, are instructed by the Sisterhood of St. Joseph, under the direction of the Rev. P. Bardou. For the general use of the Catholic blind, the catechism of their church has been embossed at Louisville, under the special supervision of the Bishop of Kentucky. For Protestants, the *Society for Religious Literature*, recently organized at Philadelphia, propose to issue devotional works of a non-denominational character. At present, our Protestant pupils are instructed in an undenominational series of Sunday-school lessons.

Medical Department.

185 pupils have already arrived this session, and some more are expected. Among so many blind persons, vital statistics would prepare us for much illness and some deaths. The general health, however, continues excellent, in spite of blind persons' well-known predisposition to disease, and also in spite of our over-crowded buildings. The physician, Dr. Corson, makes daily visits, and passes under close scrutiny all ailments, real or imaginary. Dr. Corson's system of ophthalmic treatment has brought many severe affections under control, and in several cases I have had the great pleasure of returning children to their homes with their sight restored.

Domestic Department.

The Government are already in possession of particular information respecting the structural renewals, alterations and extensions required, and I trust, Sir, that your recommendations may be speedily carried out. The old heating service was never designed for the task that is now put upon it, and in many parts of the building the coils require the company of stoves to keep the steam-pipes warm. The flooring of the main halls has become macerated into a mere anatomy of pine knots, so that the central line looks like the backbone of some gigantic saurian showing through the floor. In the United States the public institutions have found the only flooring material that wears satisfactorily to be the Georgia or yellow pine. Of this, the "comb-grained" variety is the best, but it is expensive, costing in the Northern States \$50 per thousand feet at the planing-mill. It can scarcely be hoped that any part of the Dominion will furnish this valuable wood; the *habitat* of the tree (*Pinus Mitis* of Michaux) lies south of a line drawn from the

mouth of the Delaware River to the head of Lake Superior. The wood is close grained, but its tough-wearing quality is probably due in large measure to its resinous character. This suggests whether one of the numerous rosin oils would not be a better application for soft pine floors than the linseed oil that we have generally used.

Trouble is often experienced here in procuring satisfactory coal, hard as well as soft. The insertion of the name of the mine in the contract does not prove a sufficient check. The best analyst or mineralogist cannot identify coal in this way; and, even though the coal offered may actually be taken from the mine alleged, the particular seam may contain such an admixture of coal-shale and foreign substances that the fuel is practically rendered worthless. Coal-shale is simply a slaty mineral, stained with carbon, and it bears a relation to true coal inferior to the relation that stained basswood bears to mahogany. In respect of weight the relation is reversed, coal-shale being often twice as heavy as coal. Finally, when the fuel is wet, it is difficult to distinguish coal from this worthless substitute. Coal miners and dealers are thus exposed to strong temptation. The only effective check on this adulteration is to burn in the Institution furnaces an occasional load of the fuel as it is being delivered. I would therefore recommend that in our contracts for coal, hard as well as soft, the following stipulation be inserted:—"The coal shall be delivered dry, free from slack, small coal, and foreign substances; when consumed in the Institution furnaces it shall not yield any clinkers or more than twenty per cent. of ash." These conditions are not unduly onerous—they were fulfilled in 1879; and coal that does not come up to these conditions is not proper fuel.

Our defective iron roofs are now being treated with the cement and paint process that I lately recommended; and, from a close examination of other roofs that have been similarly treated and have remained staunch for three years, I think that we have at length solved a perplexing question. This important repair is being defrayed by the Department of Public Works. The roof of the newly erected wing is not included in the repairs, as it remains quite water-proof. The same firm (Messrs. Gould and Agnew) that laid this new roof have the contract for the cementing of the older roofs.

Grounds.

The Institution grounds are now fast being redeemed from their bleak desolation, but a small annual subsidy will be required for some years to come. The grounds ought to be thickly studded with clusters of evergreen trees to break the force of the gales which sometimes strike this terrace with appalling violence. Here, as in the realms of King Aleinôis, the west wind doth prevail; but our blind minstrels are not fanned by languid zephyrs, as was Demodocus, the blind minstrel of the soft Phæacians. No; the storms that thunder down the Oxford Hills, leap the Grand River, and charge up our incline, are wild marauders that can be kept at bay only by dense *chevaux-de-frise* of evergreens. For wind-fences, Norway spruce (*Abies excelsa*) is of course invaluable, but in the same genus we have two native trees, the black spruce and the white (*A. Nigra*, *A. Alba*), whose merits hitherto have been singularly overlooked, and which yield very pleasing contrasts of foliage. There is a variety of the Canadian black spruce that reaches a majestic height, and which in symmetry and other ornamental qualities yields to no evergreen imported from Norway hills or any other. There are also great decorative capabilities in our native cypress and arbor vitae. Not the least part of the valuable service yielded by the recent Agricultural Commission of Ontario, was a review of our Canadian forest trees.

With a little labour, I could readily form a most ornamental sheet of water from the natural springs in the low marshy part of our ground. A lovely bit of landscape gardening is there trying to smile through a veil of reeds and sedges. At present the ground is generously given over to squatting bullfrogs that make our summer nights hideous by fruitless endeavours to tune their violincellos. This sheet of water could in winter be put to excellent service as a skating pond, and thus be made to yield a vast fund of healthful enjoyment to the blind. There can be no doubt that systematic physical exercise would immensely reduce the list of weakly and morose. The blind are so debarred from usual outlets of muscular energy that they require enforced exercise, not only on physical but even on moral grounds. Swimming is a valuable acquisition, and the blind learn it readily.

By his expertness in swimming, one of our pupils, Frederick Boyer, recently, under circumstances of extreme difficulty and danger, rescued a blind companion from drowning in Port Colborne harbour. He well earned by his courage, and received, the medal of the Royal Humane Society of England. The presentation was publicly made at the close of last session, by the Provincial Secretary, the Hon. A. S. Hardy, who, with great kindness, came from Toronto specially to honor the occasion.

Conclusion.

Though blind persons are often constitutionally timid, yet there are not wanting conspicuous instances where the brave heart within has guided blind men to high endeavour. In our day, the Coryphaeus of blind athletes—intellectual as well as physical—is the present Postmaster-General of England. But it is often erroneously said that Professor Fawcett's is the first instance where, without sight, any one has become a leading publicist or man of affairs. In the history of Europe other instances are not wanting, even though we should confine ourselves to the present century. In Belgium, fifty years ago, Rodenbach was one of the lions to be visited. Lady Morgan and Mrs. Trollope have left us graceful silhouettes of the blind deputy as he appeared in the legislature and in society. He largely directed the revolutionary movement of 1830, carrying by his personal weight the exclusion of the Orange-Nassau family from the Belgian throne. A quarter of a century earlier, when Holland became a province of France, and Napoleon's brother became its pro-consul, Louis Bonaparte found indispensable to his government the talents and integrity of blind Schimmelpenninck, who had been the Grand Pensionary of the Dutch Republic. Only fourteen years ago, the blind King of Hanover sturdily defended the autonomy of his people against the Man of blood and iron; and, like blind John of Bohemia, who faced the English at Crecy, George V. faced the Prussians at Langensalza. Ay, and defeated them with heavy loss! though afterwards the fortune of war went against him, as it did against his mightier ally. In England, blindness has hitherto proved a most formidable barrier to advancement, presumably because blind men were not recognized in Doomsday Book! Mr. Gladstone doubtless used some heroic discipline with his parliamentary forces before justice was done to Professor Fawcett. Yet cases are not wanting in England where public men have had to rely on the eyes of others. Lord Sherbrooke (Hon. Robt. Lowe) has lately made public reference to his dependence upon readers. Mr. Gladstone's own sight was, in his early days of authorship, threatened by a painful affection, and it was while he was seeking alleviation in France that he published at Amiens his famous book on *The State in its Relation to the Church*. In recognizing the merits of Professor Fawcett, the Premier was upholding the cause of sightless merit throughout the world. This high official recognition will have far-reaching results, and will mark 1880 as a memorable year in the history of the blind.

I have the honour to be, Sir,

Your obedient servant,

J. HOWARD HUNTER, M.A.,

Principal.

STATISTICS

For the year ending 30th September, 1880.

I.—NATIONALITIES.

	No.		No.
American	5	Irish	51
Canadian	67	Norwegian	1
English	48	Scotch	20
French	2	Wendish	3
German	6		203

II.—RELIGION.

	No.		No.
Baptists	6	Lutherans	7
Bible Christians	2	Methodists	59
Congregationalists	1	Presbyterians	31
Davidites	2	Quakers	2
Disciples	1	Roman Catholics	34
Episcopalians	56	Tunkers	1
Jews	1		203

III.—AGES.

	No.		No.
6 years	6	17 years	17
7 "	3	18 "	10
8 "	4	19 "	10
9 "	7	20 "	16
10 "	10	21 "	10
11 "	10	22 "	10
12 "	9	23 "	8
13 "	11	24 "	8
14 "	6	25 "	1
15 "	15	Exceeding 25 years	22
16 "	10		203

IV.—OCCUPATIONS OF PARENTS.

	No.		No.
Agents	2	Butcher	1
Artist	1	Cabman	1
Auctioneer	1	Carpenters	15
Axe grinder	1	Clerks	2
Barber	1	Conductor	1
Blacksmiths	5	Coopers	2

PHYSICIAN'S REPORT.

INSTITUTION FOR THE BLIND,

BRANTFORD, October 6th, 1880.

J. W. LANGMUIR, Esq.,

Inspector of Prisons and Public Charities.

SIR,—I have the honour to transmit the following, as the Report of the Physician for the current year ending 30th September, 1880.

It is known to you that a great tidal wave of disease swept over this Province during the winter of 1879-80. In common with nearly every city, town, village and hamlet in the country, our Institution passed through the trying ordeal of an epidemic, first of measles, and afterwards of scarlet fever. The first case of measles made its appearance in the month of January, and in a few days afterwards about forty pupils were down with the disease. In such an exigency, with our limited hospital accommodation, it became necessary to convert three of the dormitories into wards for this large number of patients. Our resources were also severely taxed in improvising a staff of efficient nurses, yet I am happy to state the whole number were brought safely through. In one of the younger pupils, however, the attack was complicated by a severe inflammation of the lungs, accompanied by such grave symptoms as a high temperature and low muttering delirium, but after hanging in the balance between life and death for several days the inflammatory action subsided and the little patient was finally restored to health.

Only a short rest was granted us before scarlet fever made its unwelcome appearance in our midst, but, by taking the precaution to isolate the cases as they occurred, the disease was fortunately limited to some half dozen pupils. About the same time the malady found its way into the families of the Principal, the Trades-instructor, the gardener and the teamster, outside the Institution, so that a total of fifteen or twenty cases were under treatment, all of whom passed through the disease in safety. Both measles and scarlet fever are popularly considered communicable from one to another, and no doubt measles are highly contagious, yet in the case of scarlet fever there are facts which prove conclusively that the disease is spread by other means than contagion, as in its sudden and universal outbreak in a large city, where the question of contagion must be excluded as impossible, and under such circumstances the epidemic could not be controlled or circumscribed in its progress. Aside from any epidemic cause, whether atmospheric or electrical, the most common origin of these exanthemata is to be found in foul water, or the vitiated atmosphere generated by cesspools and privy vaults, and from these causes we are comparatively free. Had it been otherwise—had there been these unwholesome conditions of air and water combined with the overcrowded state of the Institution, the consequences might have been serious in the extreme. And I am here reminded to observe, that owing to the large increase in our numbers, greater perils are in store, should an epidemic overtake us with dormitories so closely packed with human beings as to prevent a pure and healthy atmosphere within. Let us hope your influence will be used at the next session of the Legislature to secure the increased accommodation so urgently demanded.

In the treatment of the diseases of the eye, with which a class of our pupils are afflicted, very practical and beneficent results have been obtained during the year. Pupils who entered the Institution practically blind, have been returned to their homes with vision so far restored as to permit their engaging in the ordinary avocations of every day life.

The food supplied has been generally satisfactory, with one marked exception. I refer to the butter, which is an important article of diet; but for a considerable time the contractor furnished quantities so rancid and rank as to be not only unpalatable but positively deranging and injurious to the delicate stomachs of the pupils.*

* As soon as this matter was reported to me I instructed the Bursar to return to the contractor the bad butter, and to buy good at the contractor's expense. I also gave notification of the cancellation of the contract.—INSPECTOR.

It is matter for congratulation that there are no deaths to record for the year, and the fact seems marvellous when we remember the large number who suffered from some form of severe illness, especially in the case of a delicate female pupil who had dropsy of the chest, from chronic pleurisy. This patient had a similar attack on the opposite side of the chest, the previous year, and she was advised not to return to the Institution, especially as there was a consumptive tendency in her family history.

I take pleasure in acknowledging my obligations to the Principal for his earnest co-operation in enforcing all needed sanitary regulations, and for his countenance and support generally, in the discharge of my responsible duties.

I have the honour to be, Sir,

Your obedient servant,

WILLIAM C. CORSON, M.D.,

Physician.



